

AMENDMENTS TO THE CLAIMS

This listing of claims replaces all prior versions, and listings, of claims in the application.

1. (Currently Amended) A magnetic carrier for a biological substance, which
(i) has a saturation magnetization of 30-80 A·m²/kg and a coercive force of 2.39-11.94 kA/m,

(ii) is a ferromagnetic iron oxide particle coated with ~~silica~~ a composite oxide of silicon and aluminum comprising (a) a ferromagnetic iron oxide particle having an aspect ratio of 1.0-1.2 and (b) ~~silica~~ a composite oxide of silicon and aluminum coating the particle in a proportion of 3-100 wt% of the particle, wherein the particle has an average particle size of 0.1-0.5 μm, and wherein the ~~silica~~ composite oxide of silicon and aluminum coating is adhered to the surface of the particle to form the outermost layer of the particle, and
(iii) can bind a nucleic acid.

2. – 5. (Canceled)

6. (Previously Presented) The magnetic carrier of claim 1, wherein the ferromagnetic iron oxide particle is a magnetite particle.

7. (Canceled)

8. (Previously Presented) The magnetic carrier of claim 1, wherein the ferromagnetic iron oxide particle is selected from the group consisting of a magnetite particle, a maghemite particle and a manganese zinc ferrite particle.

9. – 14. (Canceled)

15. (Withdrawn) A method of using a magnetic carrier for binding a biological substance, which method comprises bringing the carrier of claim 1 into contact with the biological substance in an aqueous solution of a sample containing the biological substance.

16. (Withdrawn) The method of claim 15, wherein the biological substance is a nucleic acid.

17. (Withdrawn) A method of isolating a biological substance, which comprises forming a complex of a biological substance and a magnetic carrier by bringing the magnetic carrier of claim 1 into contact with said biological substance in an aqueous solution of the sample containing the biological substance, separating the complex from the sample by an external magnetic field, and eluting the biological substance from the complex.

18. (Withdrawn) The method of claim 17, wherein the biological substance is a nucleic acid.

19. (Withdrawn) A production method of the magnetic carrier of claim 1 which comprises adding, for neutralization, an acid to an aqueous suspension comprising a ferromagnetic iron oxide particle having an aspect ratio of 1.0-1.2 dispersed therein and sodium silicate dissolved therein, wherein, in said aqueous suspension, the amount of the ferromagnetic iron oxide is 1-10 wt% of water and the amount of the sodium silicate is 0.3-2 wt% of water, on conversion to SiO_2 .

20. (Withdrawn) The production method of claim 19, further comprising a heat treatment of the carrier in an inert gas.

21. (Withdrawn – Currently Amended) A production method of the magnetic carrier of claim 1, comprising subjecting ferromagnetic iron oxide coated with ~~silica~~ a composite oxide of silicon and aluminum to a heat treatment at 200-800°C.

22. (Withdrawn) The production method of claim 21, wherein the heat treatment is conducted in an atmospheric gas of an inert gas or a reducing gas.

23. (Withdrawn – Currently Amended) The production method of claim 21, wherein the ferromagnetic iron oxide particle is synthesized by oxidation in an aqueous

solution and applied to a silica composite oxide of silicon and aluminum coating treatment without drying.

24. (Withdrawn) A production method of the magnetic carrier of claim 9, which comprises

adding, for neutralization, an acid to an aqueous suspension comprising a ferromagnetic iron oxide particle dispersed therein and silicate and an aluminum salt dissolved therein to allow precipitation of a compound comprising silicon and aluminum, filtrating the aqueous suspension to give a solid, drying the solid, and subjecting the solid to a heat treatment in an inert gas.